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Model Number

ML7-54-G-5250

Retroreflective sensor with 4-pin, M8 x 1 connector

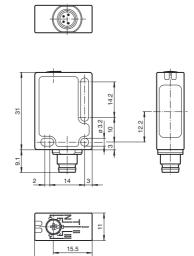
Features

- Reliable sensor for standard applications
- Miniature design with versatile mounting options
- Reliable recognition of reflective objects and clear glass
- Two machines in one: clear object detection or reflection operating mode with long range
- TEACH-IN switch for setting the contrast detection levels
- Automatic adjustment in case of soiling in contrast detection mode
- · Certified by ECOLAB

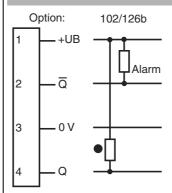
Product information

Small, robust, effective, and reliable - these are the properties of the ML7 sensor series. Due to their small size, number of versions, and two different lens positions, they are particularly suited for installation in tight spaces. The robust design and high quality of Pepperl+Fuchs mean they can also be used under harsh environmental conditions. The efficient technology, switching frequencies up to 1000 Hz, high resistance to ambient light, and 4-in-1 output make the series suitable for non-contact object detection.

Dimensions



Electrical connection

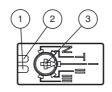


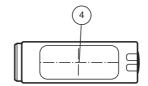
- O = Light on
- = Dark on

Pinout



Indicators/operating means





1	Operating display	green
2	Signal display	yellow
3	Teach-In	
4	Optical center	



General specifications Effective detection range 0 3.5 m in TEACH mode 0 5.7 m at switch position "N" Thesehold detection range 7.6 m Reference target H852 reflector Light source LED Light type modulated visible red light , 660 nm Angle deviation max. ± 1" Dlameter of the light spot approx. 40 mm at detection range 1 m Angle of divergence 1.7° Ambient light limit 40000 Lux Functional safety related parameters Mission Time (T _{th}) Mission Time (T _{th}) 20 a Diagnostic Coverage (DC) 0 % Indicators/operating means LED green, statically lit Power on , Undervoltage indicator: Green LED, pulsing (approx. 0.8 Hz) , short-circuit : LED green lisabing (approx. 0.8 Hz) , short-circuit : LED green lisabing (approx. 0.8 Hz) , short-circuit : LED green lisabing (approx. 0.8 Hz) , short-circuit : LED green lisabing (approx. 0.8 Hz) , short-circuit : LED green lisabing (approx. 0.8 Hz) , short-circuit : LED green lisabing (approx. 0.8 Hz) , short-circuit : LED green lisabing (approx. 0.8 Hz) , short-circuit : LED green lisabing (approx. 0.8 Hz) , short-circuit : LED green lisabing (approx. 0.8 Hz) , short-circuit : LED green lisabing (approx. 0.8 Hz) , short-circuit : LED green lisabing (approx. 0.8 Hz) , short-circuit : LED green lisabing (approx. 0.8 Hz) , short-circuit : LED green lisabing (approx. 0.8 Hz) , short-circuit : LED green lisab	Technical data					
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Reflector distance	•		0 3.5 m in TEACH mode 0 5.7 m at switch position "N"			
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Diagnostic Coverage (DC)	•					
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to IEC 60664-1 functional insulation acc. to DIN EN 50178	Approvals and certificates					
UL approval cULus	Protection class					
	UL approval		cULus			

Accessories

Montagekit OMH-ML7-01

Mounting set consisting of bracket OMH-ML-01 sheet OMH-ML7-03, and fastening material

Montagekit OMH-ML7-02

Mounting set consisting of bracket OMH-ML-02 sheet OMH-ML7-03, and fastening material

OMH-ML7-01

Mounting bracket

OMH-ML7-02

Mounting bracket

OMH-ML7-03

Fixing plate

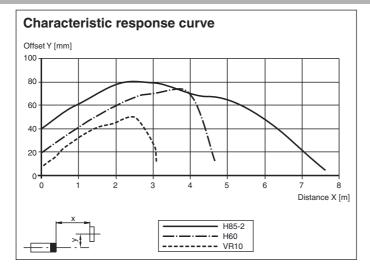
Suitable reflectors and cable sockets can be found in the Internet

EPPERL+FUCHS

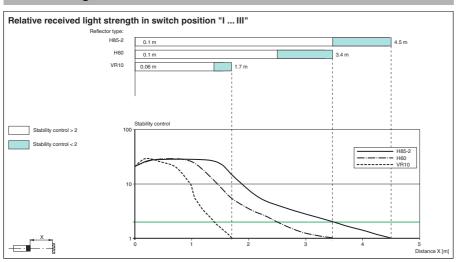
CCC approval

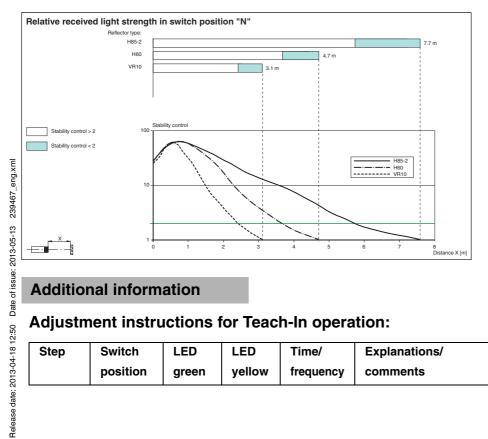
CCC approval / marking not required for products rated ≤36 V

Curves/Diagrams



Curves/Diagrams





Additional information

Adjustment instructions for Teach-In operation:

Step	Switch	LED	LED	Time/	Explanations/
	position	green	yellow	frequency	comments

1	N	on	flashes	4/s	In switch position "N" directed towards reflector.
					Reflector detected without function reserve.
	N	on	on	-	In switch position "N" directed towards reflector.
					Reflector detected with function reserve (recommended).
2	Т	off/on	on	200 ms	The selection of a new switch position is indicated by the green LED going out for a short time.
					This also applies to the selection of the other switch positions.
	Т	flashes	flashes	2.5 s	Slow alternating flashing: Teach-In process has been performed correctly .
					Max. duration of the Teach-In process: 2 s
	T	flashes	flashes	8/s	Quick alternating flashing: Teach-In process has not been performed correctly . (e.g. receiver signal not sufficient, sensor not directed correctly towards reflector).
					Status is terminated by turning switch to position N.
3/1	1	on	on	-	Contrast detection 10 % is activated. (e.g. clean PET bottles filled with water)
3/2	II	on	on	-	Contrast detection 18 % is activated. (e.g. clear glass bottles)
3/3	III	on	on	-	Contrast detection 40 % is activated. (e.g. coloured glass or non-transparent materials)

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